

## Abstract

Relay units (1002-1-1002-n) terminate a plurality of transport layer connections from terminals in a transport layer and relay each of these connections to other transport layer connections (relay connections). A transmission rate control unit 5 (1003) determines the total transmission rate of the relay connections according to the number of connections that are being relayed and network congestion conditions such that a desired effective rate is obtained, and moreover, allots the total transmission rate as transmission rates to each of relay units (1002-1-1002-n) in accordance with the results of the analysis of 10 information of the applications being carried on the transport layer connections during relay.